

ABSTRACT

A catalyst of a water insoluble vanadyl sulfate or a complex catalyst, in which a specific oxide and a specific sulfate are combined to the water insoluble vanadyl sulfate are excellent not only in their activity, durability and SO_2 resistance, not only in substantially no oxidization of SO_2 to SO_3 as well as in HCl resistant. Therefore, using this catalyst, a decomposition treatment of an organic halide(s) can be carried out with high efficiency and good stability. In particular, a efficient decomposition treatment of an organic halide(s) can be carried out also in the cases that dust is coexist; the gas to be treated contains SO_x or HCl ; or they generate in the decomposition area.